We claim:

1. An optical fiber comprising:

a core and a cladding surrounding said core, including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of the induced emission of Nd^{3+} at about a 1.3 μm wavelength band.

2. An optically active apparatus comprising:

(1) an optical fiber comprising a core and a cladding surrounding said core, said core including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of the induced emission of Nd^{3+} at about a 1.3 μm wavelength band;

(2) a light source for generating excitation light for exciting Nd^{3+}; and

(3) optical means for directing said excitation light from said light source to said optical fiber.

3. An apparatus according to claim 2, wherein said optical fiber transmits light at or near said 1.3-μm wavelength band.

4. An apparatus according to claim 2, wherein said light source generates excitation light at or near a 0.80-μm wavelength band.

5. A fiber amplifier comprising:

(1) an optically active apparatus comprising:

(a) an optical fiber comprising: a core and a cladding surrounding said core, said core including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of the induced emission of Nd^{3+} at about a 1.3 μm wavelength band;

(b) a light source for generating excitation light for exciting Nd^{3+}; and

(c) optical means for directing said excitation light from said light source to said optical fiber; and

(2) coupling means for coupling signal light at or near said 1.3-μm wavelength band to said optical fiber.

6. A fiber laser comprising:

(1) an optically active apparatus comprising:

(a) an optical fiber comprising: a core and a cladding surrounding said core, said core including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to supress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of the induced emission of Nd^{3+} at about a 1.3 μm wavelength band;

(b) a light source for generating excitation light for exciting Nd^{3+}; and

(c) optical means for directing said excitation light from said light source to said optical fiber; and

(2) resonator means for feeding light at or near said 1.3-μm wavelength from said optical fiber back to said optical fiber.

7. An optical waveguide device comprising:

a core portion and a cladding portion partially surrounding said core portion, said core portion including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of an induced emission of Nd^{3+} at about a 1.3 μm wavelength band.

8. An optically active apparatus comprising:

(1) an optical waveguide comprising a core portion and a cladding portion partially surrounding said core portion, said core portion including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of an induced emission of Nd^{3+} at about a 1.3 μm wavelength band;

(2) a light source for generating excitation light for exciting Nd^{3+}; and

(3) optical means for directing said excitation light from said light source to said optical waveguide device.

9. An apparatus according to claim 8, wherein said optical waveguide device transmits light at or near said 1.3-μm wavelength band.

10. An apparatus according to claim 8, wherein said light source generates excitation light at or near a 0.80-μm wavelength band.

11. A waveguide amplifier comprising:

(1) an optically active apparatus comprising:

(a) an optical fiber comprising: a core portion and a cladding portion partially surrounding said core portion, said core portion including and optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a probability of an induced emission of Nd^{3+} at about a 1.3 μm wavelength band

(b) a light source for generating excitation light for exciting Nd^{3+}; and

(c) optical means for directing said excitation light from said light source to said optical fiber; and

(2) coupling means for coupling signal light at or near said 1.3-μm wavelength band to said optical waveguide device.

12. A waveguide laser comprising:

(1) an optically active apparatus comprising:

(a) an optical waveguide comprising: a core portion and a cladding portion partially surrounding said core portion, said core portion including an optical functioning glass comprising a host glass doped with Nd^{3+} as an active ion and doped with a quantity of U^{4+} which absorbs an emission at about a 1.06 μm wavelength band to suppress induced emission of Nd^{3+} at about said 1.06 μm wavelength band and to increase a prob-